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WILDLIFE OF THE SQUIRREL RIVER, ALASKA

SCOTT R. ROBINSON, Kobuk District, Bureau of Land Management, Fairbanks, Alaska 99703. 1987.

INTRODUCTION

The Squirrel River watershed is home to many species of wildlife. Caribou from the Western Arctic Herd migrate through this area, while moose are yearlong residents. This is the only BLM land within the Kobuk District that is inhabited by Dall's sheep. Tundra swans nest on lakes in the valley bottom, while rough-legged hawks, golden eagles, and gyrfalcons nest along upper reaches of the river and its tributaries. Arctic char, grayling, and chum salmon inhabit portions of the river and its tributaries.

Subsistence and sport hunters and fishermen from Kiana, Noorvik, Kotzebue, Fairbanks, and Anchorage hunt and fish in this watershed. Caribou and moose are important sources of red meat for these hunters. Dall's sheep is a secondary source of meat, but is highly prized as a trophy animal. Anadromous fish are extremely valuable to commercial and subsistence fishermen. Aquatic, wetland, and riparian habitats are important to several species of fish and wildlife.

Portions of the Squirrel River watershed also have mineral resources. Mining claims for placer gold have been located on Klery Creek and Timber Creek. Copper claims have been staked along the North Fork, and the U.S. Bureau of Mines has identified a copper deposit of unknown size in the same area. The U.S. Geological Survey completed a field survey of mineral resources, but their open file report is not yet available. In its Seward 1008 Study, the BLM (1983) opened the whole watershed, except for an expanded Wild and Scenic River Study Area, to full operation under the General Mining Law of 1872 and Mineral Leasing Act of 1920.

The U.S. National Park Service (NPS) wishes to recommend the Squirrel River for designation as a Wild and Scenic River, but must wait for additional mineral information before proceeding onward.

Present information on populations and distribution of fish and wildlife is limited for making management recommendations. Therefore, the BLM has been conducting fish and wildlife inventories in recent years. These include a fisheries inventory (Webb 1981), and extensive inventories of big game and nesting raptors (Adams 1982a, 1982b, 1983). An evaluation trip of the Squirrel River was conducted from 3 to 7 August 1982 to determine its eligibility for designation as a Wild and Scenic River (Smith 1982). Field inventories of cultural resources, wildlife (emphasizing moose, Dall's sheep, and tundra swans), and fisheries were conducted in 1985. The sheep and swan inventories were repeated in 1986.

Field inventories conducted by other governmental agencies and individuals include a floral and faunal inventory of the Baird and Schwatka Mountains (Dean 1964). An extensive biological survey of the Noatak River Valley was

Singer and Johnson (1983), Ayres (1985), and ADF&G (1986b) have conducted surveys of Dall's sheep in the Baird Mountains. The Alaska Department of Fish and Game (ADF&G) uses the Squirrel River as an index river to count salmon escapement for the Kobuk River drainage (Dinnocenzo 1983). D. Craighead (1986a,b) of Wildlife-Wildlands Institute began studying caribou, grizzly bears, and their habitats within the Squirrel River watershed in 1984.

The purpose of this report is to summarize all known terrestrial wildlife data that has been gathered. David James, Doug Larsen, Joe Webb, and Kieth Woodworth provided helpful suggestions. Stan Bloom assisted with preparation of the maps. Smith (1985) reported information on cultural resources and Webb (1985) reported information on the fisheries resource for the same area.

STUDY AREA

The Squirrel River watershed encompasses approximately 1,025,000 acres, of which BLM is the major land manager/owner. The watershed is bounded on the north and west sides by the Noatak National Preserve, on the south side by Hotham Inlet and the Kobuk River, and on the east side by the Kobuk Valley National Park. The Squirrel River is a major tributary to the Kobuk River and can be located on the Baird Mountains, Noatak, and Selawik USGS 1:250,000 topographic maps. The village of Kiana lies at its confluence with the Kobuk River, approximately 60 miles east of Kotzebue.

This watershed lies within the Baird Mountains and Kobuk-Selawik Lowlands physiographic divisions described by Wahrhaftig (1965). The Baird Mountains are moderately rugged with rounded to sharp summits 2,500 to 3,000 feet in elevation. They rise abruptly from lowlands on the south and west. The Kobuk-Selawik Lowlands are broad river flood plains and lake dotted lowlands that transform into deltas at their seaward margins. The Kiana Hills are a group of rounded hills less than 2,000 feet in elevation.

Small mammals were trapped at the following locations (Figure 1), with habitat descriptions noted below:

Trapline No. 1 - KRM T. 20 N., R. 09 W., S. 29
2 - KRM T. 21 N., R. 09 W., S. 07
3 - KRM T. 21 N., R. 09 W., S. 05
4 - KRM T. 22 N., R. 09 W., S. 04
5 - KRM T. 20 N., R. 09 W., S. 35
6 - KRM T. 21 N., R. 09 W., S. 35
7 - KRM T. 22 N., R. 11 W., S. 19
8 - KRM T. 22 N., R. 12 W., S. 13
9 - KRM T. 23 N., R. 11 W., S. 19
10 - KRM T. 22 N., R. 13 W., S. 26

Trapline No. 1 was located at about 20 feet elevation in the eastern portion of the valley bottom. Habitat was streamside riparian composed of tall willow with an understory of grass and horsetail.

Trapline No. 2 was located on a 400 foot hilltop in the eastern hills of the watershed. Vegetation was mostly dwarf birch and blueberry with scattered black spruce.

Trapline No. 3 was located on another hilltop at 800 feet elevation. Vegetation was mostly low shrub scrub with some medium high alder and scattered amounts of black spruce.

Trapline No. 4 was located in alpine tundra habitat in the eastern portion of the watershed at 1,200 feet elevation. Vegetation was mostly grass and forbs with scattered juniper.

Trapline No. 5 was located at about 15 feet elevation in the eastern portion of the valley bottom. Habitat was tussock tundra with poorly developed tussocks.

Trapline No. 6 was located on a hillside at 600 feet elevation. Overstory vegetation was open tall shrub scrub mixed with some spruce. Understory vegetation had grass, forbs, blueberry, and cranberry. This trapline appeared to have the most diverse vegetation of all the traplines.

Trapline No. 7 was in tussock tundra, but located in the western portion of the valley bottom. Elevation was 200 feet. Labrador tea and dwarf birch are also present.

Trapline No. 8 was located in open black spruce at 500 feet elevation in the western portion of the watershed. Labrador tea, lichens, and some willow were present.

Trapline No. 9 was in alpine tundra at 1,200 feet elevation, but in the western portion of the watershed. Vegetation was composed of grass, forbs, and low willow.

Trapline No. 10 was located in a xeric white spruce forest along the main stem of the Squirrel River. The spruce was open with lichen, moss, and blueberries present.

METHODS

A multi-disciplinary investigation of the Squirrel River watershed was conducted from 15 to 22 August 1985 to look for cultural resources, fish, and wildlife. The field crew (Howard Smith, Scott Robinson, and Joe Webb) and pilot George Carroll commuted between Kotzebue and the Squirrel River on a daily basis in a Jet Ranger helicopter (Bell 206). Observations of animals, their tracks, scats, and bird songs were recorded at various locations, including the sites where small mammals were trapped.

Two traplines were established on a daily basis and recovered the following day. Each trapline consisted of 26 stations placed about 20 feet apart for an estimated total of 520 feet (0.1 mile). Two different sizes (one mouse trap and one rat trap) were normally placed at each station for a total of 52 traps per line, except trapline No. 4 which had 56 traps. Bait consisted rolled oats mixed with peanut butter. Roman meal cereal was substituted when the supply of oats ran out.

Robinson surveyed tundra swans by helicopter on 21 August 1985 and Piper Super Cub (PA-18) on 18 August 1986. Survey procedures followed those reported by King and Conant (1981). I also surveyed Dall's sheep by Piper Super Cub on 18

June 1985, 18 and 19 July 1985, and 19 August 1986. In cooperation with ADF&G, Robinson conducted a population survey of moose from 18 to 24 November 1985 (Larsen et al. 1986a). Survey procedures followed a modified version of those reported by Gasaway et al. (1984).

RESULTS AND DISCUSSION

Trapping Success. A total of 524 traps were set for one night each. We recorded 13 broken traps, seven sprung traps, five traps with missing bait, and one trap not recovered during five days of trapping. If these 26 trap sets are considered unavailable to rodents, then a net of 498 trap sets can be used to calculate trap success. Thirty-three of the 498 trap sets (6.6%) were successful in capturing animals. This compares to one percent trap success in the Tubutulik River watershed (Robinson 1987), 1.6 percent in the Dulbi River watershed (Robinson field notes), and 26.8 percent trap success in the Kateel River watershed (Robinson 1985).

Fifteen red-backed voles, ten tundra voles, five singing voles, one red squirrel, and two gray jays were captured. Red-backed voles, tundra voles, and singing voles were always caught in the smaller mouse traps, while tundra voles, red squirrels, and gray jays were caught in the larger rat traps.

Species Account. The BLM has observation records for 28 species of birds and mammals. The ADF&G (1973, 1978, 1986a) also describes general distribution for an additional 14 species. Table 1 lists all 42 species. All observation data and field maps are on file in the BLM Kobuk District Office, Fairbanks, Alaska.

The following species account treats only the species either observed or reported for the Squirrel River watershed. Phylogenetic sequence and nomenclature follow AOU (1983) for birds and Jones et al. (1975) for mammals. Unless otherwise described, status and nesting habitat are provided by Armstrong (1984) for birds and by ADF&G (1978) for mammals.

Arctic Loon (Gavia arctica). Although numbers were not counted, several arctic loons were observed during the swan surveys. They are common in western Alaska and nest on many of the same ponds that other waterfowl and shorebirds inhabit.

Tundra Swan (Cygnus columbianus). The Squirrel River valley has approximately 49,000 acres of tundra swan habitat covered by the following USGS maps: Baird Mountain A-4, A-5, and B-5 (Figure 2). Nine paired adults, one single adult, and seven cygnets were observed in 1985 for a total of 26 swans. In 1986, seven paired adults and one single adult was present, but the number of cygnets was double for a total of 29 swans (Table 2). Search intensity was 1.6 minutes per square mile during each survey. Changes in weather and water level probably account for the different number of birds counted in these two years. Many of the same ponds were occupied in both years. Tundra swans are common in western Alaska.

Northern Harrier (Circus cyaneus). Adams (1982b) reported one northern harrier along the upper Omar River. I observed three harriers in the hills near Timber Creek and Spruce Creek. Northern harriers nest on the ground in open, marshy habitat. They are uncommon in western Alaska.

Rough-legged Hawk (Buteo lagopus). Adams (1982b) reported three active nests along the North Fork plus an additional bird that was not associated with a known nest. Rough-legged hawks restrict their nest building to cliffs and rock outcrops. They are common in western Alaska.

Golden Eagle (Aquila chrysaetos). Webb (1981) reported one active nest along Klery Creek. Adams (1982b) reported an active nest along the North Fork and another active nest along the Omar River. He also documented one eagle in February and five in June that were not associated with known nests. Golden eagles restrict their nest building to cliffs and rock outcrops. They are uncommon in western Alaska.

Gyrfalcon (Falco rusticolus). We observed a pair of gyrfalcons in an area between the Omar River and Timber Creek that Adams (1983) had recommended for further investigation. Gyrfalcons also restrict their nest building to cliffs and rock outcrops. They are uncommon in western Alaska.

Spruce Grouse (Dendragapus canadensis). Spruce grouse nest on the ground in coniferous and mixed forests. They rarely occur in western Alaska.

Willow Ptarmigan (Lagopus lagopus). Willow ptarmigan nest in luxuriant vegetation associated with willow thickets, tundra, and muskeg. They are common in western Alaska.

Rock Ptarmigan (Lagopus mutus). We observed scats of rock ptarmigan in alpine tundra at 1,200 feet elevation west of the North Fork. They nest underneath shrubs on rocky hillsides. Rock ptarmigans are common in western Alaska.

Lesser Golden-Plover (Pluvialis dominica). Herb Brownell saw one lesser golden-plover at 1,200 feet elevation in the headwaters of the North Fork. They nest in tundra moss located on drier hillsides. Lesser golden-plovers are common in western Alaska.

Long-tailed Jaeger (Stercorarius longicaudus). One long-tailed jaeger was observed in the hills near Timber Creek and Spruce Creek. They nest on dry upland tundra. Long-tailed jaegers are common in western Alaska.

Gray Jay (Perisoreus canadensis). Gray jays were observed wherever spruce forests occur, but are uncommon in western Alaska. Jays nest in conifers.

Common Raven (Corvus corax). Common ravens are widespread, occupy many different habitats, and are common in western Alaska. Ravens nest in trees and on cliffs.

American Robin (Turdus migratorius). Two robins were observed during the field inventories, but are classified as common in western Alaska. Robins nest in trees.

Bohemian Waxwing (Bombycilla garrulus). One bohemian waxwing was observed during the field inventories, and are classified as rare in western Alaska. Waxwings nest in conifers.

White-crowned Sparrow (Zonotrichia leucophrys). One white-crowned sparrow was observed during the field inventories, but are classified as common in western Alaska. They nest either on the ground or in low shrubs along forest edges.

Snowshoe Hare (Lepus americanus). Adams (1982b) reported abundant snowshoe hares along the North Fork and Omar River. We also observed evidence of abundant snowshoe hares. Of particular interest, we discovered skeletal remains of at least 22 snowshoe hares near a prominent point overlooking an unnamed tributary located west of the North Fork. This area appeared to be a favorite feeding station for predators.

Northern Hare (Lepus timidus). Northern hares are present, but information on their population and distribution is unknown.

Alaska Marmot (Marmota broweri). Alaska marmots may be found at higher elevations, but information on their population and distribution is unknown.

Arctic Ground Squirrel (Spermophilus parryii). Arctic ground squirrels are common in suitable habitat, but information on their population and distribution is unknown.

Red Squirrel (Tamiasciurus hudsonicus). One red squirrel, weighing 231 grams, was captured at trapline 1. Habitat was streamside riparian composed of tall willow with an understory of grass and horsetail. Information on their population and distribution is unknown.

Beaver (Castor canadensis). Beavers are common in the Kobuk River drainage, but may be less so in the Squirrel watershed (Woodworth, pers. comm. 1987).

Northern Red-backed Vole (Clethrionomys rutilus). Red-backed voles were the most abundant of all that were captured: 15 voles at six of ten traplines. Their distribution was also the most widespread. Elevation of traplines ranged widely from 200 to 800 feet. Vegetation varied from mostly shrubs with scattered spruce to mostly spruce with an understory of shrubs. Four voles were trapped in tussock tundra with labrador tea and dwarf birch. Average weight of these voles was 22.7 grams, ranging from 16 to 41 grams.

Tundra Vole (Microtus oeconomus). Ten tundra voles were captured at four traplines located throughout the Squirrel River watershed. Eight of these voles were captured at wet sites located in the valley bottom, while two voles were captured at 600 feet in dryer, hillside vegetation. Average weight of these voles was 31.2 grams, ranging from 18 to 62 grams.

Singing Vole (Microtus gregalis). Distribution of singing voles were restricted to higher elevations throughout the Squirrel River watershed. Five voles were captured at two traplines located in alpine tundra habitat at 1,200 feet elevation. Average weight of these voles was 15 grams, ranging from 12 to 23 grams.

Muskrat (Ondatra zibethicus). Muskrats are common in lower portions of the Kobuk River drainage.

Porcupine (Erethizon dorsatum). Adams (1983) reported one porcupine along Tukpahlearik Creek. We observed evidence of porcupine at Trapline No. 6. Overstory vegetation was open tall shrub scrub mixed with some spruce. Understory vegetation had grass, forbs, blueberry, and cranberry. Information on their population and distribution is unknown.

Coyote (Canis latrans). Coyotes are occasionally present, but information on their population and distribution is unknown.

Gray Wolf (Canis lupus). Adams (1982a) reported abundant wolf tracks and scats along the Omar River. We observed a pack of five wolves during the 1985 moose survey, and K. Woodworth and L. Adams saw two other wolves during Fall 1986. We discovered three den sites between the North Fork and Timber Creek.

Arctic Fox (Alopex lagopus). Arctic foxes are occasionally present, but better habitat lies along coastal beaches outside of the Squirrel River watershed.

Red Fox (Vulpes vulpes). Adams (1982a) reported one fox along the North Fork and another along the Omar River. Howard Smith observed another in the hills near Timber Creek and Spruce Creek. Red foxes are classified as common in western Alaska.

Black Bear (Ursus americanus). In past years, K. Woodworth has seen black bears along the upper portion of Timber Creek, lower portion of Klery Creek, and central portion of the valley bottom. Adams (1982a) reported black bear tracks on gravel bars along lower stretches of the Omar River. I observed a bear in the eastern portion of the valley bottom during the 1985 swan survey. Black bears are uncommon in northwestern Alaska.

Grizzly Bear (Ursus arctos). Adams (1982a) reported three grizzly bears along the Omar River in summer 1982. Brownell observed two bears in the upper portion of the North Fork in summer 1985. We observed tracks in the Kiana Hills, near Spruce Creek, and in the western portion of the valley bottom that same year. In summer 1986, I observed two adults and two cubs in the western portion of the valley bottom. Four possible den sites have been located during sheep surveys.

On 30 June and 2 July 1986, D. Craighead mounted radio collars on two adult bears (one female and one male). These collars transmit animal location data to an orbiting satellite The female was originally captured approximately seven miles upstream from the mouth of the Omar River, and has a restricted home range. Her collar did not function well and was replaced on August 30. The male was captured along Timber Creek, but soon moved out of the Squirrel River watershed. The intent of this study is to correlate home range and movement patterns of grizzly bears with remote sensing of their habitat (Reynolds, pers. comm. 9/25/86).

Marten (Martes americana). Marten probably occur in the Squirrel River watershed, but information on their population and distribution is unknown.

Weasels (Mustela spp). Weasels are common, but information on their population and distribution is unknown.

Mink (Mustela vison). Mink are common.

Wolverine (Gulo gulo). Wolverines are common.

River Otter (Lutra canadensis). River otters are common.

Lynx (Felis lynx). Adams (1982a,b) reported one lynx during February along Timber Creek and another during summer along the Omar River. Lynx populations in western Alaska follow the same basic cycle as in other portions of the northern boreal forest.

Moose (Alces alces). All portions of the Squirrel River watershed are inhabited by moose at different times of the year. Adams (1982a) counted 55 moose during a two day survey in February 1982. Larsen et al. (1986a) summarized the moose survey conducted in November 1985. We observed 537 moose (491 adults, 46 calves) during five days of stratification flights. Our search intensity was one minute per square mile. Extensive movement by moose appeared to be occurring during this venture, which contributed to the poor quality estimate (395 moose ± 120%) calculated from subsequent intensive survey flights. Therefore, the 537 moose observed during the stratification flights times a calculated correction factor gives a better estimated population of 609 moose. Average density was 0.4 moose per square mile (Figure 3). Moose appeared to be randomly distributed during the November survey, but appear to concentrate along the Omar and Squirrel River downstream from the Omar River during mid to late winter.

These results were compared to other moose surveys conducted in the local area. Estimated moose density on the Selawik National Wildlife Refuge was 0.5 and 0.4 moose per square mile in 1984 and 1985, respectively (Spindler and Hall 1985, Larsen et al. 1986b). A portion of the middle Noatak River watershed had an estimated density of 1.1 moose per square mile in 1985 (James and Cannon 1985).

Caribou (Rangifer tarandus). Members of the Western Arctic Herd migrate through the Squirrel River valley each fall and spring, but animals can be seen during all seasons of the year. The area between the North Fork and the Omar River has a large number of trails. Adams (1982a) counted 60 caribou during winter 1982, but survey conditions were not good and many animals were not seen. Adams (1982b, 1983) and I have observed scattered groups of caribou (mostly males) throughout the Squirrel River watershed during the summer months from 1982 through 1986. In October 1986, I counted 515 animals in the valley bottom west of Timber Creek. D. Craighead (1986b) plans to study caribou habitat in addition to grizzly bear habitat, but progress reports are not available.

Dall's Sheep (Ovis dalli). In July 1985, ADF&G and NPS biologists counted 594 sheep on approximately 530,000 acres in the Noatak National Preserve (ADF&G 1986b). In addition to this, the Squirrel River watershed has 371,000 acres of sheep habitat (Figure 4). Adams (1982a, 1983) counted 11 sheep along the Omar River in June 1982, and three sheep along an unnamed tributary west of the North Fork in June 1983. A partial survey conducted by myself in September 1984 revealed seven sheep. In 1985, I counted 16 sheep in June and 12 sheep in July (six were on adjacent NPS land) for the entire Squirrel River watershed (Table 3). This data suggests that BLM land offers peripheral habitat adjacent to better quality habitat on NPS land. However, the ADF&G/NPS survey had a search intensity of one minute per square mile, while the BLM survey had a search intensity of 0.5 minute per square mile. Therefore, some animals were probably not seen during the less intensive BLM survey.

In July 1986, ADF&G and NPS biologists counted 669 Dall's sheep in the Noatak National Preserve (Roney, pers. comm. 1986). In August, I counted 96 sheep between the North Fork and Tukpahlearik Creek (approximately 186,000 acres), which appears to have the best sheep habitat on BLM land. Six additional animals were seen on adjacent NPS land for a total of 102 sheep. This survey had a search intensity of one minute per square mile. Based upon an 85 percent correction factor (ADF&G 1986b), the estimated sheep population for the surveyed area was 113 animals. Habitat located west of the North Fork was not surveyed due to foul weather. The 1986 data suggests that sheep may move off NPS land during the hunting season.

Wildlife Harvest. The harvest data presented in this section only reflect reported harvest, mostly by sport hunters. Many subsistence hunters do not report their harvest for a variety of reasons. The presence of native allotments along the Squirrel River and the village of Kiana located at its mouth support the possibility of a greater amount of unreported harvest.

An annual subsistence harvest of 2,600 to 5,600 tundra swans is estimated to occur in Alaska, while limited sport hunting seasons were held in Utah, Nevada, Montana, and North Carolina during 1985 (USF&WS 1986).

Reported harvest of grizzly bears in the Squirrel River watershed dates back to 1962. Hunting has increased from one bear in 1983 to five bears in 1986 (Table 4).

An average of six moose per year have been hunted in the Squirrel River watershed in recent years (Table 4). Most of the hunters who report their harvest are Alaskan residents living outside of Game Management Unit 23 (Table 5). Nonresidents have hunted moose each of the last three years. Recorded harvest for 1982 and earlier years are not comparable because harvest from the Salmon and Hunt Rivers are combined with the Squirrel River.

A hunter-killed caribou was discovered by Robinson during the 1985 field inventory. At least four caribou were hunted in 1985 and five caribou in 1986 (Woodworth, pers. comm. 1987).

Dall's sheep in the western Brooks Range represents two to three percent of the statewide population and two to four percent of the statewide harvest. This population is one of two in Alaska which supports both sport and subsistence harvests. An average of two sheep have been hunted in the Squirrel River watershed from 1983 to 1986 (Table 4). Alaskan residents hunted from 1983, 1984, and 1985, while only nonresidents hunted in 1986 (Table 5). Recorded harvest for 1982 and earlier years are not comparable because harvest from the Squirrel River is combined with several other areas.

RECOMMENDATIONS

The BLM will replace its Management Framework Plan with a Resource Management Plan for the Northwest Planning Area, including the Squirrel River, sometime after 1993. The Federal Land Policy and Management Act of 1976 directs BLM to conduct inventories as part of its planning process. Moreover, the Alaska National Interest Lands Conservation Act of 1980 requires an 810 Evaluation of proposed action(s) on subsistence uses and needs. Therefore, the following inventories directed towards wildlife populations and habitats are necessary

prior to assessing (1) possible reductions in harvestable resources used for subsistence purposes and (2) possible reductions in the availability of resources caused by an alteration in their distribution, migration, or location (BLM 1986).

1. Purpose of the 1985 moose survey was to help ADF&G determine if the population was supporting current subsistence and sport hunting pressure. It should be repeated in 1990 to determine population trend and if any changes in management are necessary.

2. ADF&G has been monitoring movements of WAH caribou through use of radio-transmitting collars. BLM assisted by tracking caribou in the Buckland Valley and Nulato Hills during the 1986-1987 winter (Robinson and Field 1987). BLM could increase its assistance by tracking caribou in the Squirrel River watershed to document annually used migration routes.

3. NPS and ADF&G have been conducting surveys of Dall's sheep in the Baird Mountains to determine if the population can support current subsistence and sport hunting pressure. BLM's surveys have provided additional data for assessing the total Dall's sheep population. Continuance of this work will help identify population size and important habitat on BLM land.

4. The tundra swan is a species of international significance and is a good indicator species for crucial wetland habitat on BLM land. In addition to swan surveys conducted by USF&WS and NPS, BLM's swan surveys provide information for the total swan population of Northwest Alaska.

5. Traplines are established in the Squirrel River watershed. Monitoring of snowmachine trails during winter would provide some sense of trapping effort.

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TABLE 1. RELATIVE ABUNDANCE OF WILDLIFE
SQUIRREL RIVER, ALASKA

SPECIES	ABUNDANCE	SOURCE
BIRDS		
Arctic Loon (Gavia arctica)	Common	BLM
Tundra Swan (Cygnus columbianus)	Common	BLM
Northern Harrier (Circus cyaneus)	Uncommon	BLM
Rough-legged Hawk (Buteo lagopus)	Common	BLM
Golden Eagle (Aquila chrysaetos)	Uncommon	BLM
Gyrfalcon (Falco rusticolus)	Uncommon	BLM
Spruce Grouse (Dendragapus canadensis)	Rare	ADF&G 1978
Willow Ptarmigan (Lagopus lagopus)	Common	ADF&G 1978
Rock Ptarmigan (Lagopus mutus)	Common	BLM
Lesser Golden Plover (Pluvialis dominica)	Common	BLM
Long-tailed Jaeger (Stercorarius longicaudus)	Common	BLM
Gray Jay (Perisoreus canadensis)	Uncommon	BLM
Common Raven (Corvus corax)	Common	BLM
American Robin (Turdus migratorius)	Common	BLM
Bohemian Waxwing (Bombycilla garrulus)	Rare	BLM
White-crowned Sparrow (Zonotrichia leucophrys)	Common	BLM
MAMMALS		
Snowshoe Hare (Lepus americanus)	Common	BLM
Northern Hare (Lepus timidus)	Uncommon	ADF&G 1978
Alaska Marmot (Marmota broweri)	Uncommon	ADF&G 1978
Arctic Ground Squirrel (Spermophilus parryii)	Common	ADF&G 1978
Red Squirrel (Tamiasciurus hudsonicus)	Uncommon	BLM
Beaver (Castor canadensis)	Uncommon	Woodworth
Red-backed Vole (Clethrionomys rutilus)	Common	BLM
Tundra Vole (Microtus oeconomus)	Common	BLM
Singing Vole (Microtus gregalis)	Common	BLM
Muskrat (Ondatra zibethicus)	Common	ADF&G 1978
Porcupine (Erethizon dorsatum)	Uncommon	BLM
Coyote (Canis latrans)	Occasional	ADF&G 1978
Gray Wolf (Canis lupus)	Common	BLM
Arctic Fox (Alopex lagopus)	Occasional	ADF&G 1978
Red Fox (Vulpes vulpes)	Common	BLM
Black Bear (Ursus americanus)	Uncommon	BLM
Grizzly Bear (Ursus arctos)	Common	BLM
Marten (Martes americana)	Uncommon	ADF&G 1978
Weasels (Mustela spp)	Common	ADF&G 1978
Mink (Mustela vison)	Common	ADF&G 1978
Wolverine (Gulo gulo)	Common	ADF&G 1973
River Otter (Lutra canadensis)	Common	ADF&G 1978
Lynx (Felis lynx)	Common	BLM
Moose (Alces alces)	Common	BLM
Caribou (Rangifer tarandus)	Common	BLM
Dall's Sheep (Ovis dalli)	Uncommon	BLM
TOTAL	42 SPECIES	

TABLE 2. POPULATION OF TUNDRA SWANS ON BLM LAND
SQUIRREL RIVER, ALASKA
1985 and 1986

YEAR	QUAD MAP	PAIRED ADULTS	SINGLE ADULTS	YOUNG BIRDS	TOTAL BIRDS
1985	BAIR A-4	5	1	6	17
1985	BAIR A-5	3	0	1	7
1985	BAIR B-5	1	0	0	2
1985	TOTAL	9	1	7	26
1986	BAIR A-4	3	1	11	18
1986	BAIR A-5	4	0	3	11
1986	BAIR B-5	0	0	0	0
1986	TOTAL	7	1	14	29

TABLE 3. POPULATION OF DALL'S SHEEP ON BLM LAND
SQUIRREL RIVER, ALASKA
1982 TO 1986

SURVEY DATES	MALES	FEMALES	YOUNG	TOTAL SHEEP
June 1982	11	0	0	11
June 1983	3	0	0	3
Sept 1984	0	4	3	7
June 1985	10	5	1	16
July 1985	3	3	0	6
August 1986	34	47	15	96

TABLE 4. REPORTED HARVEST OF BROWN BEAR, MOOSE, AND DALL'S SHEEP SQUIRREL RIVER, ALASKA 1983 to 1986.

WILDLIFE SPECIES	1983	1984	1985	1986	AVERAGE
Grizzly Bear	1	2	3	5	2
Moose	1	12	0	10	6
Dall's Sheep	1	0	4	2	2

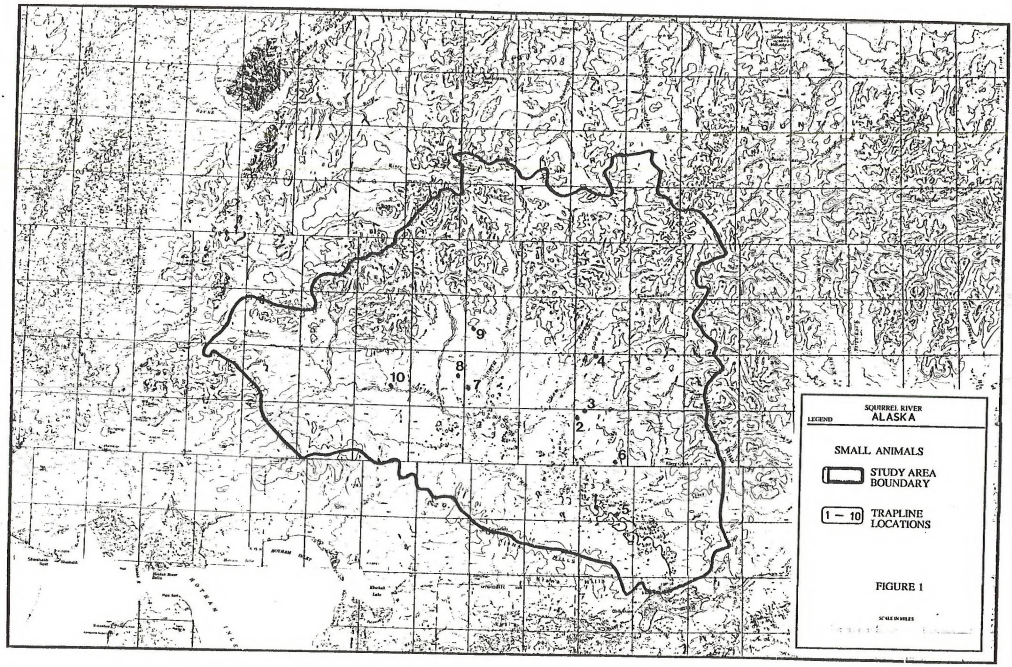
SOURCE: ADF&G Data Files.

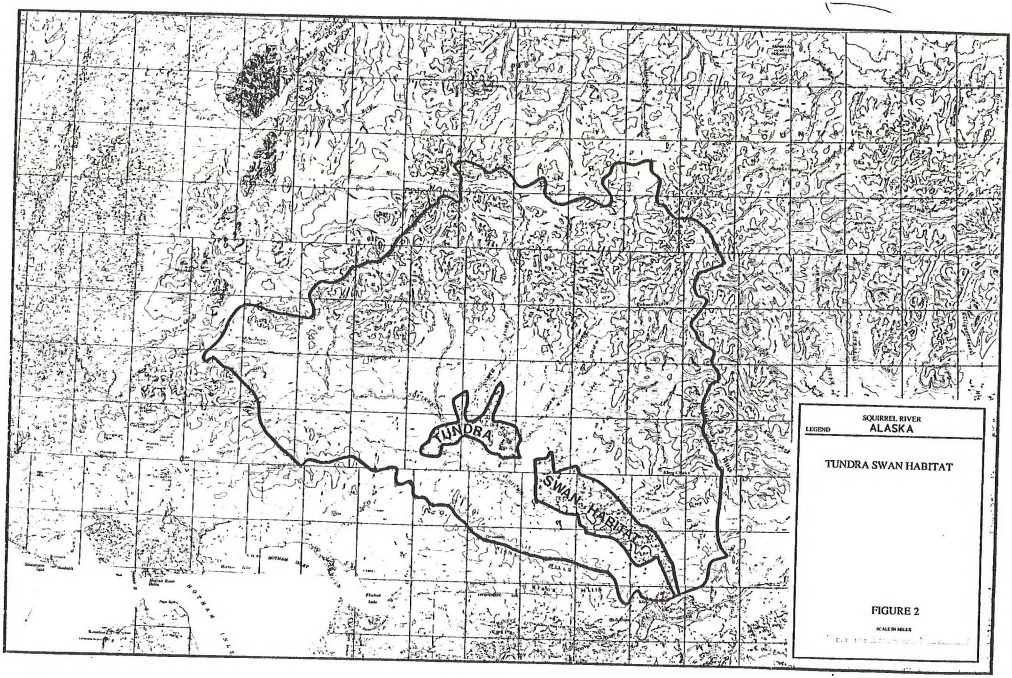
TABLE 5. RESIDENCY OF ALL REPORTING HUNTERS FOR MOOSE AND DALL'S SHEEP SQUIRREL RIVER, ALASKA 1983 TO 1986

WILDLIFE SPECIES	1983	1984	1985	1986	AVERAGE
Moose					
Local Residents[a] 3		N.R.[b]	6	1	2
Alaska Residents	8	13	2	7	8
Nonresidents	0	5	1	4	2
Unspecified	0	0	0	1	0
Total Hunters	8	18	3	12	10
Dall's Sheep					
Local Residents[a] 1		N.R.[b]	N.R.[b]	1	0
Alaska Residents	1	1	4	0	2
Nonresidents	0	0	0	2	0
Unspecified	0	0	0	0	0
Total Hunters	1	1	4	2	2

a: Resident of Game Management Unit 23; also included as Alaska resident.
b: Not recorded.

SOURCE: ADF&G Data Files.


SQUIRREL RIVER
ALASKA
LEGEND
SMALL ANIMALS
STUDY AREA BOUNDARY
1 – 10 TRAPLINE LOCATIONS
FIGURE 1
SCALE IN MILES
10
8
7
9
4
3
2
6
5


TUNDRA
SWAN HABITAT
SQUIRREL RIVER
LEGEND
ALASKA
TUNDRA SWAN HABITAT
FIGURE 2
SCALE IN MILES

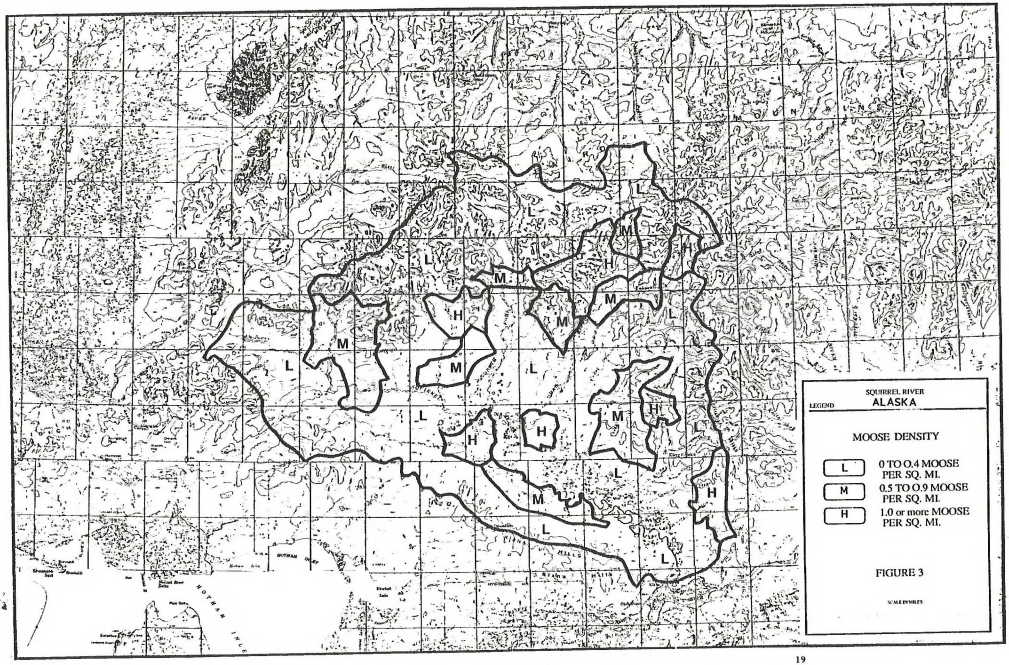
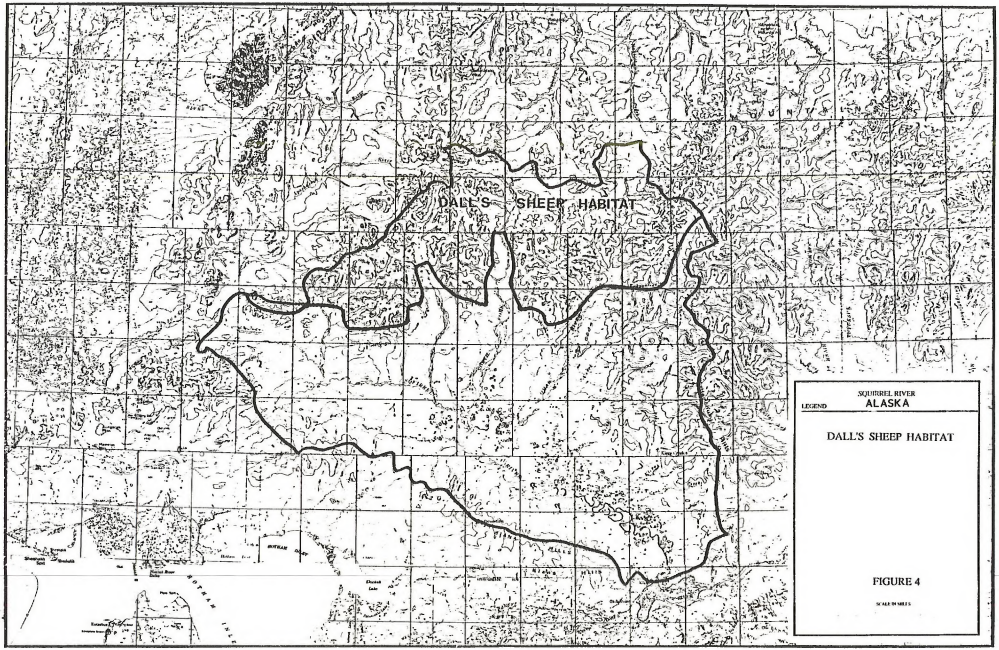

SQUIRREL RIVER
LEGEND
ALASKA
MOOSE DENSITY
L
0 TO 0.4 MOOSE PER SQ. MI.
M
0.5 TO 0.9 MOOSE PER SQ. MI.
H
1.0 or more MOOSE PER SQ. MI.

FIGURE 3


DALL'S SHEEP HABITAT
SQUIRREL RIVER
ALASKA
LEGEND
DALL'S SHEEP HABITAT
FIGURE 4
SCALE IN MILES

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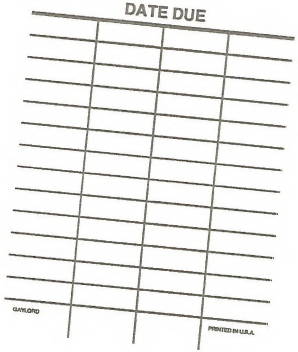

BLM MISSION STATEMENT

The Bureau of Land Management is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the needs of the American people. Management is based upon the principles of multiple-use and sustained yield; a combination of uses that takes into account the long term needs of future generations for renewable and non-renewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness, and natural, scientific and cultural values.

BLM-ALASKA MISSION STATEMENT

In Alaska, the Bureau of Land Management is responsible for carrying out the mandates of the Alaska Native Claims Settlement Act, the Alaska National Interest Lands Conservation Act, and the Alaska Statehood Act along with the Federal Land Policy and Management Act and other federal laws. These duties make cooperative management a vital necessity. BLM-Alaska's success as a public land guardian and resource manager is dependent on its ability to serve the public through mutual understanding. Sustaining a working partnership with the public is a key element of multiple use management, given the special nature of Alaska and its people. To this end, BLM-Alaska:

*exists to serve the public.

*safeguards the land and ensures needed resources are available to future generations.

*keeps the nation's promises of the land to the Natives and the State of Alaska.

*serves as an information storehouse for the public.